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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/376,904

08/18/1999

SEISHO YASUKAWA

10746/9

7097

26646

7590

12/17/2004

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ONE BROADWAY
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EXAMINER

ODLAND, DAVID E

ART UNIT

PAPER NUMBER

2662

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/376,904

Applicant(s)

YASUKAWA ET AL.

Examiner

David Odland

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 12-26, 30-34 and 37-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 27-29, 35 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/04/03, 11/5/02, 12/21/01, 8/18/99.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The following is a response to the Applicants Election/Restriction response filed on 10/08/2004. The Applicant has elected Group I that consists of claims 1-11, 27-29, 35 and 36. Claims 12-26, 30-34 and 37-40 are Non-elected claims are therefore withdrawn from consideration.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8, 11, 27-29, 35 and 36 rejected under 35 U.S.C. 102(b) as being anticipated by Fan (USPN 5,337,308), hereafter referred to as Fan.

Referring to claims 1, 2, 11, 27, 29 and 35, Fan discloses an ATM switch which includes at least one basic switch (a multi-stage ATM switch (see figure 1)), said basic switch comprising means which refers to time information written in a header of an input cell and switches cells to an output port in an ascending order of said time information (time stamps in cells are monitored and cells with the minimum value time stamp is output (see figure 1 –3 and column 6 lines 15-58)). Note, regarding claim 2, Fan discloses the ATM switch comprises first, second and third stages (see figure 1)).

Referring to claims 3,28 and 36, Fan discloses a cross-point at which an input line and an output line are crossed (a self-routing switch that interconnects input lines to output lines (see item 20 in figure 2)), a first buffer which stores a cell arriving from said input line (one buffer connects to an input line (see item 31 in figure 3)), a second buffer which stores a cell arriving from a cross-point (the buffers also receive data from the self-routing switch 20 of figure 2 (see items 31 in figure 3)), and means which compares time information of a head cell in said first buffer with time information of a head cell in said second buffer (the time stamp for the cells in the buffers are compared (see column 6 lines 15-58 and item 30 in figure 3)) and sends a head cell with earlier time information to a cross-point or said output port (the cell having the smallest time stamp is forwarded on through the switch (see column 6 lines 15-58 and figure 3)).

Referring to claim 4, Fan discloses said input lines are classified into a plurality of groups (the input lines are grouped and send to particular switching modules (see figure 1 and column 4 lines 65-68)), said first buffer storing cells arriving from said input lines of one of said groups (the buffers store cells from one of the switching modules which comprise the grouped input lines (see items 31 figure 3)), time information of a cell with the earliest time information among cells in said first buffer being compared with time information of said head cell in said second buffer (the time stamp for the cells in the buffers are compared (see column 6 lines 15-58 and item 30 in figure 3)), and a cell with earlier time information being sent to a cross-point or said output port (the cell having the smallest time stamp is forwarded on through the switch (see column 6 lines 15-58 and figure 3)).

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Referring to claim 5, Fan discloses adding means which adds arriving time information to an arriving cell as said time information (the system comprises a time stamp stage which adds the time stamps to the cells (see figure 1 and column 4 lines 59-64)).

Referring to claim 6, Fan discloses said adding means generates a dummy cell and adds time information to said dummy cell if there is no input cell (the RT cell generator, which can be considered as part of the “adding means” of the Fan system, generates idle cells with time stamps when there is an empty buffer detected (see figure 3 and column 6 lines 41-58)).

Referring to claim 7, Fan discloses that the basic switch transfers said dummy cells or said arriving cells with said time information to output ports other than the destination of said arriving cell (the idle cells are transferred to the next stage of the switch over an output line (see figure 3)).

Referring to claim 8, Fan discloses that the basic switch allows said dummy cell to be overwritten by an arriving cell (the idle cell can be overwritten (see column 6)).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fan in view of Averbuch et al. (USPN 6,160,805), hereafter referred to as Averbuch.

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Referring to claim 9, Fan discloses the system discussed above. Furthermore, Fan discloses that the time information is a value repeating periodically (inherently, the time must repeat since there is only a certain number of bits used for the time in the header of the cell). Fan does not disclose said adding means adding a flag for identifying said period to said cell, and said basic switch identifying said period by referring to said flag. However, Averbuch discloses a system wherein Beginning of Transmission (BOT) and End of Transmission (EOT) flags are used to indicate a transmission time period for a cell (see column 5 lines 36-50)). it would have been obvious to one skilled in the art at the time of the invention to implement this feature into the system of Fan because doing so would help ensure fair usage of the switching resources since each cell is given only a particular time period for transmission.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fan in view of Henrion (USPN 5,127,000), hereafter referred to as Henrion.

Referring to claim 9, Fan discloses the system discussed above. Fan does not disclose that said basic switch includes a delay time counter, adds said delay time, and uses said added delay time as said time information. However, Henrion discloses a system wherein a delay time for each cell is entered into the header field of the cell (see figures 5 and 6 column 6 lines 29-40 and claim 8)). it would have been obvious to one skilled in the art at the time of the invention to implement this feature into the system of Fan because doing so would allow the system to process cells depending on the delay, thereby making sure the cells experiencing the longest delay are processed first to help ensure quality of service of the system.

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Conclusion

7. The following prior art, which is made of record and not relied upon, is considered pertinent to applicant's disclosure:

- a. U.S. Patent Number 5467342 to Logston et al.
- b. U.S. Patent Number 5517495 to Lund et al.
- c. U.S. Patent Number 6259232 to Douglass et al

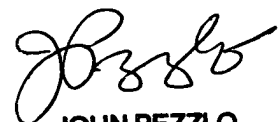
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Odland whose telephone number is (571) 272-3096. The examiner can normally be reached on Monday - Friday from 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached at (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

deo

December 5, 2004


JOHN PEZZLO
PRIMARY EXAMINER